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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/574,496

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Yusaku Inaba

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REED SMITH LLP

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EXAMINER

JACOBSON, MICHELE LYNN

ART UNIT

PAPER NUMBER

1794

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/574,496	<b>Applicant(s)</b> INABA ET AL.	
	<b>Examiner</b> MICHELE JACOBSON	<b>Art Unit</b> 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,3,6-8,10-13 and 15-20 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,6-8,10-13 and 15-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>4/3/06</u> . | 6) <input type="checkbox"/> Other: ____.  |

## DETAILED ACTION

### *Double Patenting*

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 13 and 15-20 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 4, 5, 7-10, 12 and 14 of copending Application No. 10/576878. Although the conflicting claims are not identical, they are not patentably distinct from each other because both applications are directed towards laminates comprising a layer of polycarboxylic acid mixed with a plasticizer, a metal compound and a resin layer. Although the instant applications recites that the metal compound be mixed with the resin material, the conflicting claims have substantially the same structure such that the inventions recited are patentably indistinguishable.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 3, 6-8, 10-13 and 15-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohba et al. WO 99/52973 U.S. Patent No. 6,605,344 used herein for reference (hereafter referred to as Ohba).

5. Ohba teaches a gas-barrier film which is produced through application of a metallic compound to a polymer layer formed from a mixture of a poly(meth)acrylic acid polymer and a polyalcohol such as sugar. The present invention provides a gas-barrier film which exhibits excellent oxygen-gas-barrier properties, particularly in an atmosphere of high humidity, and which is suitably used in sterilization treatment such as retorting or boiling. (Col. 1, lines 5-15) The metallic-compound-containing layer which is applied to the surface of a polymer layer may be a layer containing a metallic compound alone, or a layer containing a resin in which a metallic compound is mixed or dispersed. (Col. 2, lines 48-52) Transition metals having an oxidation number of +2 are preferable for the metallic compound in the polymer layer. (Col. 7, lines 17-18)

6. In the film of the present invention in which a metallic-compound-containing layer is applied to the surface of a polymer layer formed from a mixture of a poly(meth)acrylic acid polymer and a polyalcohol, a metal invades the polymer layer from the metallic-compound-containing layer. As described below, invasion of a metal can be confirmed by means of energy-dispersive X-ray spectroscopy (EDX). The existence ratio in the polymer layer (the number of counting of metallic atoms/the number of counting of oxygen atoms) is 0.1-20 at a position 0.1  $\mu\text{m}$  deep in a polymer layer from the interface between the polymer layer and a layer containing a metallic compound solely or a layer of a mixture of metallic compound and resin, preferably 0.5-10. When the existence ratio is high, the amount of a metallic compound in a polymer layer is large. (Col. 3, lines 22-36)

7. As used in Ohba, the term "polyalcohol" refers to low molecular weight compounds containing two or more hydroxyl groups, alcohol polymers, polyvinyl alcohols (PVA), sugars, and starches. Examples of low molecular weight compounds containing two or more hydroxyl groups include glycerin, ethylene glycol, propylene glycol and polyethylene glycol. The sugars recited to be included in the polyalcohol recitation include sugar alcohols such as mannitol, dulcitol and erythritol. In consideration of production of a polymer layer exhibiting excellent oxygen-gas-barrier properties under high humidity, the mixture ratio (by weight) of poly(meth)acrylic acid polymer to polyalcohol is preferably 99:1-20:80, more preferably 95:5-40:60, much more preferably 95:5-50:50. (Col. 5, lines 10-31 and 50-55)

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8. The gas-barrier film of the present invention and the laminated gas-barrier film produced therefrom exhibit excellent oxygen-gas-barrier properties in an atmosphere of high humidity. Therefore, the films are suitably employed for packaging material of beverages or foods susceptible to oxygen, such as furikake (processed seasoning granules), wine, dried bonito, miso, ketchup, and snacks. Particularly, the films are suitably employed for packaging material of foods which undergo sterilization treatment such as retorting or boiling, such as curry, stew, broth, sauce, and corn. The films are employed in the form of, for example, bag, casing, pouch, or capping material. (Col. 10, line 62-Col. 11, line 6)

9. The laminate of the invention is recited to produce a polymer film exhibiting excellent gas-barrier properties; i.e., a polymer layer having a thickness of 2  $\mu\text{m}$  has an oxygen permeability of  $2.0 \times 10^{-12} \text{ mol/m}^2 \cdot \text{s} \cdot \text{Pa}$  ( $400 \text{ cm}^3/\text{m}^2 \cdot 24\text{h} \cdot \text{atm}$ ) or less as measured at 30° C. and 80% RH.

10. Ohba recites a gas barrier film comprising a layer of polycarboxylic acid polymer mixed with a polyalcohol (the polyalcohols recited by Ohba being the same as the plasticizers recited by applicant) in a ratio within the ranges claimed by applicant and a layer comprising a bivalent metal compound and resin which is the same composition as claimed by applicant exhibiting an oxygen permeability the same as that claimed by applicant. Ohba is silent regarding stretch forming of the laminate recited, but does recite that the laminate film would be useful for packaging a multitude of varying products including items requiring sterilization under retort conditions. Stretch forming laminate sheets into containers is universally known in the packaging art. It would have

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been obvious to one having ordinary skill in the art at the time the invention was made to have utilized the laminate film taught by Ohba to produce stretch formed containers that were capable of undergoing retort sterilization. Production of such containers utilizing the invention disclosed by Ohba would have produced the invention and method as claimed in claims 1, 6-8, 10, 13, 16-20. The film disclosed by Ohba used to make stretch formed containers would have served as the multilayer sheet or preform claimed in claims 11 and 12.

11. Since the application of the metal containing resin layer to the polycarboxylic acid layer mixed with a plasticizer is intended to increase the oxygen barrier property of the polymer film it would have been obvious to one having ordinary skill in the art at the time the invention was made to have disposed another metal containing resin layer on the other side of the polycarboxylic acid layer to further increase the barrier properties of the film. This obvious modification of the invention recited by Ohba would have produced the invention and method as claimed in claims 3 and 15.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHELE JACOBSON whose telephone number is (571)272-8905. The examiner can normally be reached on Monday-Thursday 8:30 AM-7 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on (571) 272-1284. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Michele L. Jacobson  
Examiner /M. J./  
Art Unit 1794

/Carol Chaney/

Supervisory Patent Examiner, Art Unit 1794